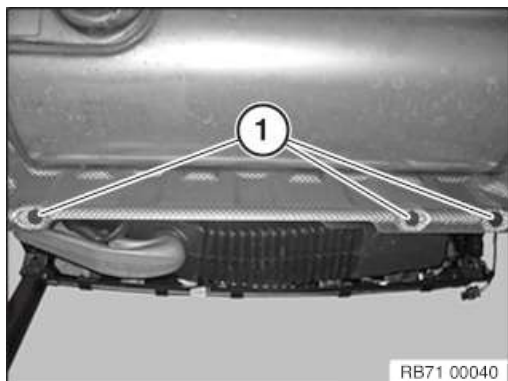
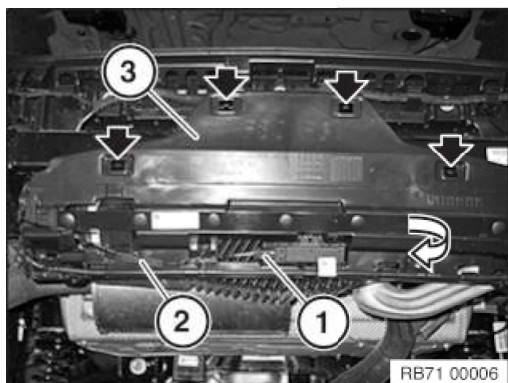


**Necessary preliminary tasks:**

- Remove [rear bumper trim](#)



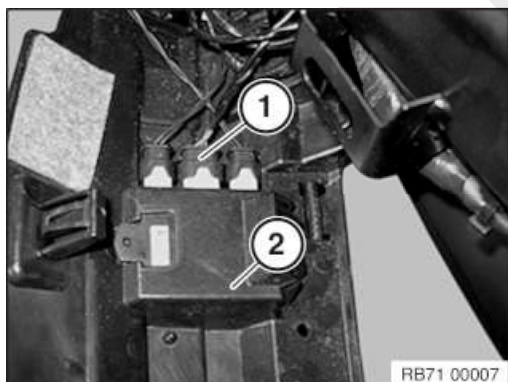
If necessary, unfasten screws (1).



Unfasten plug connection (1) and disconnect.

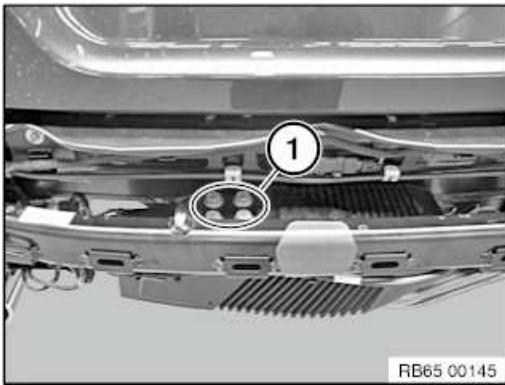
Unclip cable clip (2).

Unlock latch mechanisms at marked points and turn adapter (3) in direction of arrow.



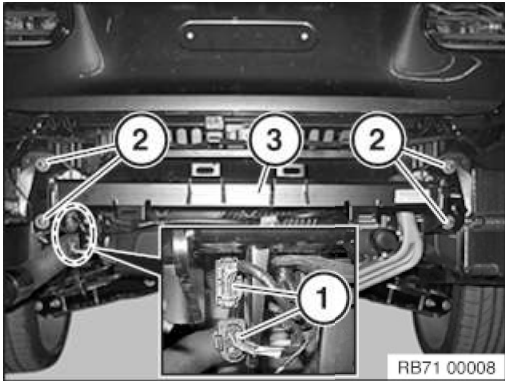
Unfasten plug connection (1) and disconnect.

Remove adapter (2).



Important!

Screws (1) must not be released!



Unlock plug connections (1) and disconnect.

Unscrew nuts (2).

Tightening torque [71 60 1AZ](#).

Remove trailer tow hitch (3) support member.

Installation note:

Replace nuts (2).



Replacement

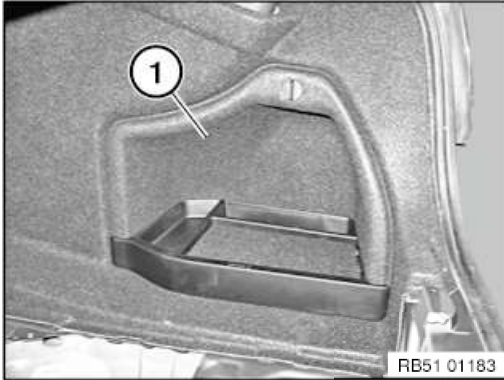
With the fully automatic trailer tow hitch up to 02/2014 the [control unit must be replaced](#).

Perform an initialisation in the test module or manual initialisation via the button in the luggage compartment (see Operating Instructions). The manual initialisation is described in the procedure.

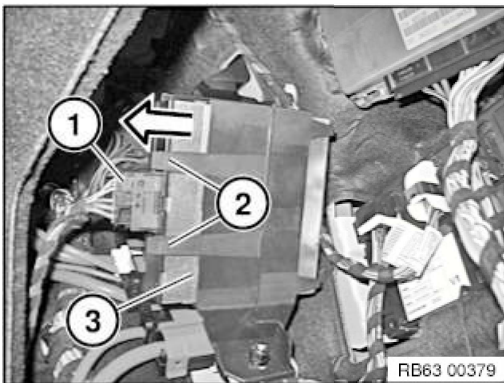


Important!

Read and comply with notes on protection against electrostatic discharge ([ESD protection](#)).



Remove flap (1). *Installation note:*
Make sure flap (1) is correctly seated.



Version with voltage transformer:

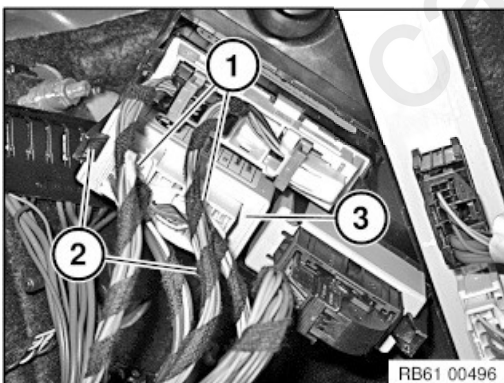
Disconnect plug connection (1).

Lever out latches (2) and pull voltage transformer (3) out of bracket.

Installation note:

Make sure plug connection (1) is correctly seated.

Make sure voltage transformer (3) is correctly seated in bracket.



Unlock plug connections (1) and disconnect.

Unlock latch mechanisms (2).

Pull trailer tow hitch control unit (3) out of holder.

Installation note:

Make sure trailer tow hitch control unit (3) is correctly seated.



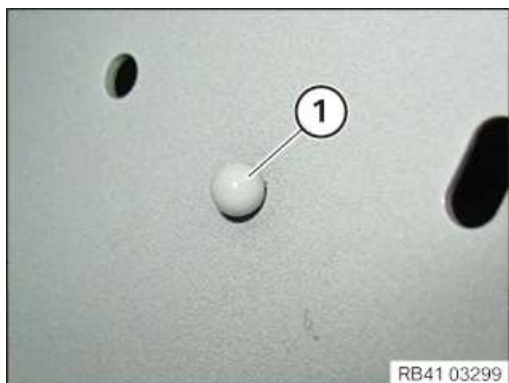
Replacement:

Perform an initialisation in the procedure or manual initialisation via the button in the luggage compartment (see Operating Instructions). The manual initialisation is described in the procedure.

72 11 ... Checklist for front seat

Event		Check	Action
Has at least one belt tensioner and/or one side airbag been activated?	Yes	Check 1 (when installed): Check all seat adjustment options of both front seats. There must be no stiff movement, sticking or other functional problems or noises across the entire adjustment range of all the seat adjustment options. Check head restraints for damage. Check crash-active headrest for activation. Only 2-door model: Check backrest lock. Backrest must unlock and lock easily without any great physical effort.	If components are OK with regard to checks 1 and 2, only replace activated belt tensioner or side airbag. Otherwise, replace faulty parts on the seat/body. Replace belt tensioner, seat belt and, if necessary, side airbag.
		Check 2 (when dismantled): Check for deformation/damage on the following components: 1. All seat cross members on the body 2. Threaded support sleeves in the seat cross members 3. End fittings on the seat mechanism. Check for visible damage or deformation.	
	No	Check all adjustment options of the head restraints. Check crash-active headrest for activation.	Replace faulty parts.
Only seat with integrated seat belt:			
Does the backrest indicator light turn on when the backrest is locked and also when the backrest is shaken?	Yes	Check microswitch of backrest lock and renew if necessary. Check electrical lines and repair if necessary.	If there is still a fault, replace the entire seat
	No	No further action necessary.	

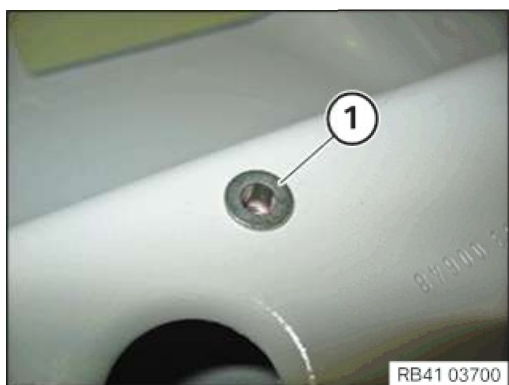
Note: On BMW and MINI bodies, various welded and pushed in bolts are being used.



Single ball/double ball (version 1):

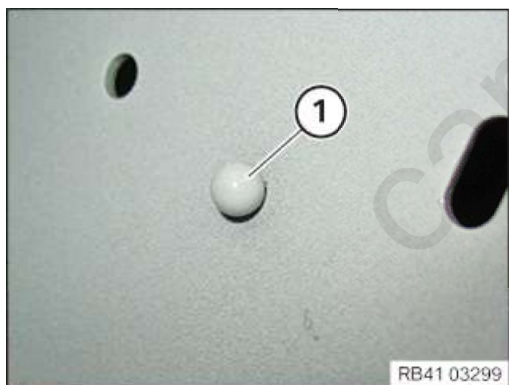
Grind off any residues of the single ball (1), if applicable.

Drill hole with diameter 7 mm.



Set blind rivet nut (1).

Screw in single ball with thread until a height of 5 mm (double ball 10 mm) is reached.



Single ball/double ball (version 2):

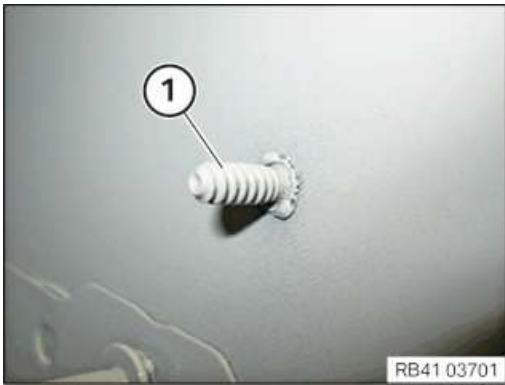
Grind off any residues of the single ball (1), if applicable.

Clean area with solvent cleaner R1.



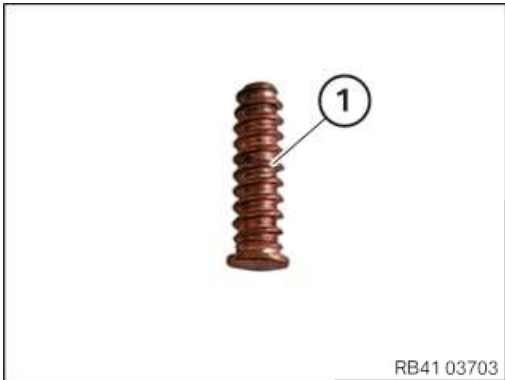
Clean bonding surface of repair element single ball (1) with solvent cleaner R1.

Bond repair element optionally with adhesive K1, K5 or window pane adhesive at the same position.

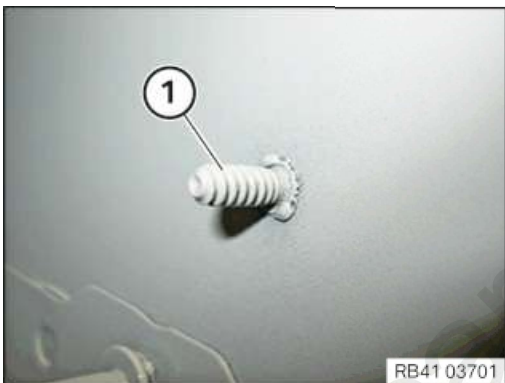


Coarse threaded bolt (version 1):

Grind off any residues of the coarse threaded bolt (1), if applicable.



Spot weld coarse threaded bolt to same position.



Coarse threaded bolt (version 2):

Grind off any residues of the coarse threaded bolt (1), if applicable.

Drill hole with diameter 7 mm.

Set blind rivet coarse threaded bolt using riveting pliers.

41 00 ... Replacing blind rivets



Special tools required:

- [2 348 128](#)
- [72 1 210](#)

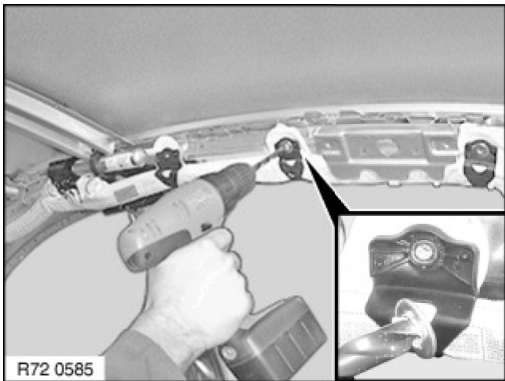


Important!

Lay out protective mats to protect the interior equipment against swarf from the drilled-out rivets and damage.

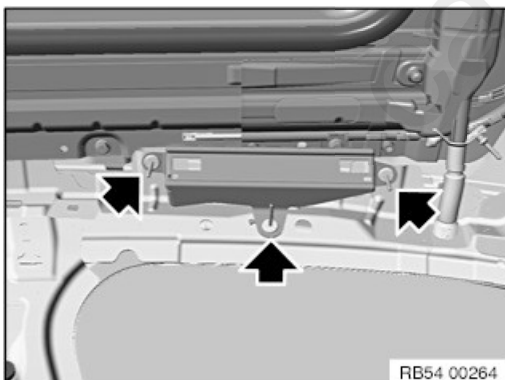
Lay out protective mats in the relevant working area:

- Instrument panel
- Entrance area
- Passenger compartment



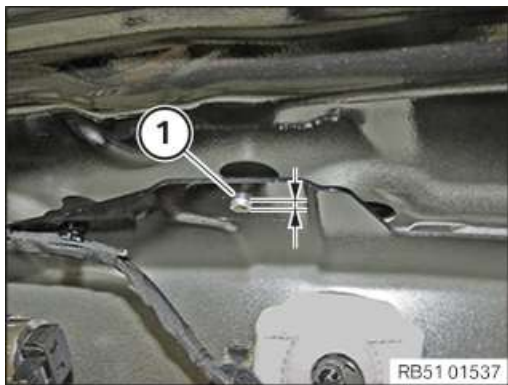
Schematic diagram of folding pack holder for head airbag:

Drill off rivet plate down to rivet shank with a 10 mm twist drill bit.



Described for grab handle holder:

Drill off rivet plate down to rivet shank with a 10 mm twist drill bit.



Drill out all blind rivet protrusions (1) up to the body.



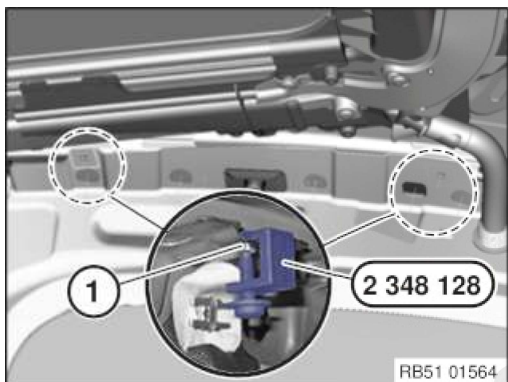
Installation note:

Apply primer to paintwork damages on side frame.

Note:

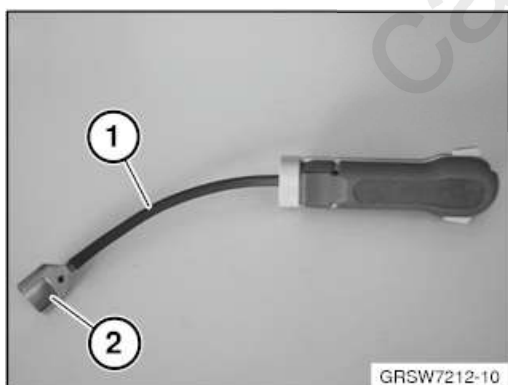
Depending on accessibility, the rivet heads will have to be removed using special tool [2 348 128](#) or [72 1 210](#).

In areas that cannot be reached using special tools, [cavity foam HS3](#) must first be applied around the rivet head before the rivet head is then punched out immediately..



Removal of rivet head with special tool 2 348 128:

Press off rivet heads (1) using special tool [2 348 128](#) and remove.



Removal of rivet head with special tool 72 1 210:

Shank (1) of special tool [72 1 210](#) is flexible and can be adapted to the relevant body contours.

Note:

Insert butyl in the collecting tray (2) to secure rivet heads and prevent them from falling out.



Insert special tool [72 1 210](#) through bore hole in body next to attachment points.

Position special tool from rear on rivet head in cavity.

Note:

A second person will be needed to help hold the special tool on the rivet head during the driving-out operation.

Make sure collecting tray is correctly fitted on rivet head.

Drive out stem with hammer and 6 mm punch.

Carefully feed special tool out of body so that rivet head does not fall out of collecting tray.



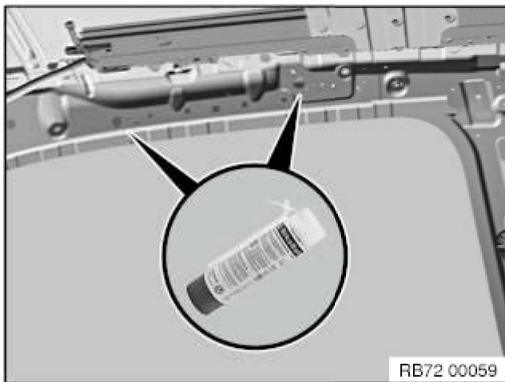
Note:

If the rivet falls out of the collecting tray into the side frame when the special tool is fed out, this area must be generously filled with foam.

For details of procedure for filling cavities with foam, see further operations.

Use cavity preservation (refer to BMW Group Parts) for foam filling.

Cavity foam (refer to BMW Group Parts) may also be used if required.



Fit tube to foam can.

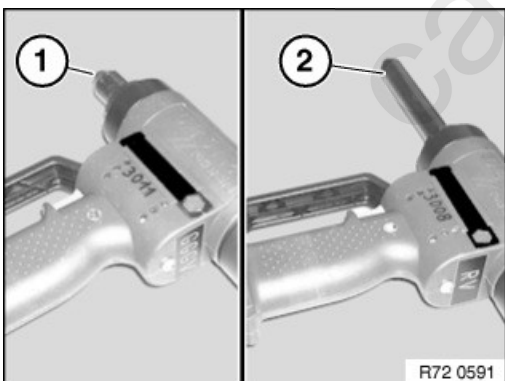
Push the hose in through the pillar holes.

Fill cavity with a filling material.

Warning!

Empty foam can completely onto cardboard and after hardening dispose of foam and can in residual waste.

Can may burst if not completely emptied.



Overview of rivet gun:

Riveting of gas generator housing and holders for folding pack with rivet gun (refer to BMW Workshop Catalogue).

The interchangeable head is changed for the different work operations.

Riveting of gas generator housing with:

- 1.) 17/36 nosepiece and short shank

Riveting of holders for folding pack:

- 2.) 17/40 nosepiece and long shank

72 00 ... Replacing the seat belt clip



Special tools required:

- [00 5 040](#)



Note:

If the position of the seat belt clip (1) cannot be identified, the position of the seat belt clip on the opposite side of the vehicle is used.

Insert the seat belt clip (1) in the previous position on the seat belt (2).



Mount the counterpiece (1).

Press the seat belt clip with special tool [00 5 040](#).

Check that the seat belt clip and counterpiece (1) are firmly seated.

Note:

If the seat belt clip is pressed too firmly, the counterpiece may loosen (1).

72 Safety information and general information

Notes on safety

- > [Safety regulations](#) for handling airbag modules and pyrotechnic belt tensioners
- > [Notes on scrapping](#) vehicles with gas generators

Handling electrical system and electronics

- > [Unlocking/locking airbag plug connections](#)
- > [Repairing airbag lines](#)
- > [Handling optical fibres](#)

Check

- > [Check seat belt](#)
- > [Checklist for seat belt](#)

Airbag system

- > See diagnosis system for FUB and check
- > [Deactivating airbags](#)
- > [Procedure after airbag deployment](#) .

Active pedestrian protection

- > [Procedure after actuator triggering](#)

72 00 ... Safety regulations for handling components with gas generators

It is essential to comply with the regulations as specified in the law relating to the use of explosives when working on airbag units and seat belt tensioners.

Airbags, seat belt tensioners etc. are pyrotechnical objects. Pyrotechnical objects are assigned to different danger classes on the basis of the quantity of propellant that they contain. The assignment can be ascertained from the identification marking on the product:

Attention!

Failure to comply with the warning notices and repair instructions for gas generator components can cause accidental deployment and result in injury and vehicle damage!

This applies in particular to the following components:

- Airbag modules (driver's/front passenger airbags, side airbags)
- Seat belt tensioner
- Head airbag
- Active knee protection
- Active head restraint
- Safety battery terminal

1. Regulations

The regulations quoted in the following refer to the Federal Republic of Germany.

In all other countries, the relevant legislation and regulations must be observed in each case. Country-specific legal regulations that go beyond this information or court decisions based thereon must be followed in each case or given precedence over these regulations.

- Pyrotechnical restraint systems are subject to danger class PT1
- Gas generators are pyrotechnical objects belonging to danger class T1

Handling, transporting and storing non-fired gas generators are subject to the "Explosive Materials Act" (law relating to the use of explosives dated 13/09/1976).

The relevant trade supervisory authority must be notified at least 2 weeks before pyrotechnical objects are handled for the first time. In this process, notify the person responsible at the relevant authority (e.g. dealership owner, holder of general power of attorney, technical supervisor) in writing. A certificate of qualification, i.e. specific training, is not required for the person responsible.

2. Dismantling and installation

- Checking and installation work must be carried out by professionally trained personnel only.
- Work on airbag system components must only ever be carried out with a disconnected vehicle battery, covered negative terminal and disconnected plug connection of the cable leading to the gas generator. Observe the specified waiting period if merely the vehicle battery is disconnected:
 - 30 min. for vehicles up to 9/93
 - 1 min. for vehicles from 9/93 onward
- In the event of breaks in work, a component with a gas generator that has been removed must be secured against access by other persons.
- Individual components must never be repaired. Instead, always replace them.
- Do not treat airbag system components with cleaning agents or grease.
- Components of the airbag system must not be exposed to temperatures in excess of 75 °C.
- Airbag system components, including electronic diagnostic components, which have been dropped from heights in excess of 0.5 m must not be reinstalled in the vehicles.
- Do not remove components of the airbag system from the original packaging until immediately before they are to be installed in the vehicle.

- Before installing, subject components such as housing, connector pins ,etc. of the airbag system (including diagnosis electronics) to a visual inspection for damage and replace if necessary.
- Airbag system components may only be electrically tested while they are installed and only with the diagnosis system.
- **Danger of injury:** The airbag module may only be set down with the airbag itself facing *upwards*. Otherwise the gas generator may be propelled upwards upon potential ignition of the gas generator.
- Do not point the ignition squib of a gas generator at other persons.
- Components with gas generators must not be fired while they are removed. They must be disposed of by special disposal companies or returned in the packaging of the new parts.
- When carrying out straightening and welding work with an electric welder:
 - Disconnect the vehicle battery
 - Cover negative terminal (post)
- Avoid all contact with the skin when removing a fired airbag module - wear gloves. Wash with water after contact with the skin.

3. Transport

- Components with gas generators must be sent off in the packaging of the new components.

4. Storage

- Observe the regulations of the relevant trade supervisory authority and the applicable national regulations.

72 11 ... Check list for automatic seat belt

Was the automatic seat belt with lower strap replaced after an accident, e.g. frontal and/or oblique collision in which the impact absorbers/deformation elements were permanently deformed? (only while seat belt was fastened)	No	Replace complete automatic seat belt The following must also be checked and replaced, if necessary: seatbelt mounts on the vehicle body seatbelt mounts on the seat seat rails.
Yes		
Does seat belt lock when pulled out suddenly?	No	Replace automatic seat belt (upper seat belt).
Does the automatic reel eliminate the belt slack?	No	Replace automatic seat belt (upper seat belt).
Yes		
Yes		
Can the seat belt strap be pulled out without jamming?	No	Automatic reel is loose - tighten reel. If fault persists: Return spring broken - replace automatic seat belt (upper seat belt).
Yes		
Does the strap on the front seat belts retract automatically? Does the strap on the rear seat belts retract automatically, a small remaining loop is acceptable if this remaining loop is fully retracted when the seat belt strap is readjusted.	No	Automatic reel is loose - tighten reel. Excessive friction in belt guides - replace automatic seat belt (upper strap). Return spring broken - replace automatic seat belt (upper seat belt).
Yes		
Does automatic reel make a squeaking noise when belt is fastened or unfastened?	Yes	Excessive friction in belt guides - replace automatic seat belt (upper strap). Automatic reel is loose - tighten reel. Return spring broken - replace automatic seat belt (upper seat belt).
No		

Is the plastic casing on the belt tongue free from damage in the area of the belt opening?	No	Replace complete automatic seat belt
Yes		

Is the fully extended seat belt strap free from pinches, burn marks, tears and cuts, creasing and unravelling?	No	Replace complete automatic seat belt
Yes		
When the seat belt is fastened, is the belt tongue ejected by spring pressure from the buckle when the "red button" is pressed?	No	Replace complete automatic seat belt
Yes		
Does fastened seat belt lock during emergency braking on a dry roadway at double walking speed?	No	Replace complete automatic seat belt
Yes		
Is fully pulled-out seat belt strap free of serious dirt and other marks?	No	If dirt and marks cannot be removed with commercially available mild detergent, the automatic seat belt (upper seat belt) must be replaced.
Yes		
In the case of seat-integrated seat belts, is front tongue of reclining mechanism or seat rail free of deformation?	No	Replace both damaged parts and complete automatic-reel seat belt. The following must also be checked and replaced, if necessary: seatbelt mounts on the vehicle body seatbelt mounts on the seat seat rails.
Yes		
The automatic seat belt is OK!		

72 11 ... Check the 3-point automatic-reel belt

General considerations when checking seat belts:

1. After replacing the EMA/REMA* automatic reel

* EMA = electromotive automatic (seat belt) reel

*REMA = reversible electromotive reel

Check the additional functions for function when replacing the EMA/REMA automatic reel after programming / encoding the vehicle.

For the EMA/REMA automatic reel functional check, it is sufficient to check that the belt slack* has been eliminated.

* Belt slack is seat belt play when the seat belt is fastened. When the seat belt is fastened, it does not immediately lie taut against the body.

Check if belt slack was eliminated for **EMA to 07/12**:

- Get in, close the doors and latch the left seat belt buckle contact
- EMA eliminates belt slack

If belt slack was not eliminated, the procedure described below must be followed:

- Allow vehicle to assume complete sleep mode and repeat the functional check.
- All doors must be closed!
- EMA, left, must be installed and connected correctly.
- Work through all fault code entries before the repeating the functional check

Check if belt slack was eliminated for **REMA from 07/12 onwards**:

- Lock left seat belt buckle contact and perform function check with diagnosis system.
- Alternatively, take a test drive at a speed of > 10 km/h

The automatic reel is completely maintenance-free and must not be opened.

2. After an accident

The seat belts must be checked after an accident.

At the beginning of the check, attempt to obtain information about the occupation of the seats in the vehicle that was involved in an accident. If this is not possible, check all of the seat belts in the vehicle and replace them if necessary.

In the event of deformations on the vehicle, you must subject the components of the restraint system affected in this area such as e.g.

- Seat belt
- Anchor fitting tensioner
- Seat belt height adjustment
- Seat belt tensioner
- Impact sensor
- etc.

to a function check and a visual inspection.

If you are in any doubt as to the unimpaired operability of restraint system components, these components must be replaced in the interests of safety!

If a seat belt has to be replaced following an accident (e.g. in the event of a frontal and/or oblique collision with permanently deformed impact absorbers/deformation elements or cross-members), the complete seat belt must be replaced! The complete seat belt comprises:

- Upper seat belt
- Lower strap
- Anchor fitting tensioner
- Seat belt buckle (belt tensioner)

- Seat belt height adjustment
- Mounting bolts of all components

The following must also be checked and replaced, if applicable:

- Belt coding on the body
- Belt coding on the seat
- seat rails.
- Seat structure (frame, etc.)

Alignment tests on the seat and the seat rails are not permitted!

The following explanations and the [check list](#) for the 3-point automatic-reel seat belt may be helpful.

An unusable seat belt or a seat belt worn in a serious accident should be destroyed immediately after removal to guarantee that it can not be used again.

Check the automatic reel and seat belt strap:

The automatic reel has two independent activation systems for seat-belt locking.

The first activation system locks the automatic reel when driving quickly around curves, driving in tight curves, on extreme inclinations (vehicle rolls over) and during sharp braking or crash.

To check, the backrest must be placed in the upright position and both hands held in a supporting position close to the steering wheel. The brakes are then operated with full intensity while driving on a dry roadway and at double walking speed.

The seat belt must lock.

The second activation system provides additional safety and is controlled by inertia mass.

If the reel locks when the seat belt strap is pulled out suddenly, this system is also OK.

In addition, the automatic reel (EMA/REMA) must eliminate belt slack.

Check whether an attempt was made to eliminate belt slack:

- Get in, close the doors and latch the left seat belt buckle contact
- EMA/REMA eliminates belt slack

If belt slack was not eliminated, the procedure described below must be followed:

- Allow vehicle to assume complete sleep mode and repeat the functional check.
- All doors must be closed!
- EM/REMA must be installed and connected correctly
- Work through all fault entries before the functional check is carried out again.

Replace the faulty or activated automatic reel.

The automatic reel is completely maintenance-free and must not be opened.

Precondition for complete, problem-free retraction of seat belt straps:

- The seat belt straps must not be twisted!
- The seat belt straps must not be damaged!

When placed to one side, the seat belt straps of the front seats must retract fully.

With the seat belt straps in the seat bench, a small remaining loop in the seat belt strap is acceptable due to increased friction between the seat belt strap and the seat bench cover if:

- this remaining loop is fully retracted when the seat belt strap is re-guided.

The seat belt strap should only be cleaned with a lukewarm soap solution or a commercial mild detergent.

Seat belt strap must never be cleaned chemically or dyed.

The automatic reel and seat belt strap must be replaced in the event of:

1. creasing
2. unravelling
3. pinches
4. cracks and tears
5. traces of melting
6. Traces of wear on the coating of the buckle tongue or on the seat belt guide loop.

Check the lower strap (belt tensioner):

To fasten a seat belt, the buckle tongue should insert easily and engage in the seat belt buckle with an audible click.

When the "Red button" is pressed, the buckle tongue must be ejected from the seat belt buckle under spring pressure.

If the seat belt buckle cover is missing or damaged, the lower strap must be replaced.

Replace the activated belt tensioner including the complete seat belt with seat belt height adjustment and mounting bolts and check the

- Belt coding on the body
- Belt coding on the seat
- seat rails.
- Seat structure

Criteria for an activated mechanical belt tensioner:

- very low position of seat belt buckle (comparisons with new part).

Criteria for an activated pyrotechnic belt tensioner:

- very low position of seat belt buckle (comparisons with new part).
- Airbag indicator light permanently lit: read out airbag system fault memory.

The belt tensioners can be activated under certain circumstances even when the seat is not occupied. If it is definite that the seat belt system was not used (seat was not occupied), there is no need to replace the following components after a check.

- Upper seat belt
- Add-on parts (seat belt height adjustment, screws)
- Belt coding on the body
- Belt coding on the seat
- seat rails.

Checking end fitting pretensioner:

Replace the triggered end fitting pretensioner including the complete seat belt with seat belt height adjustment, lower strap and mounting bolts and check the

- Belt coding on the body
- Belt coding on the seat
- seat rails.
- Seat structure

Criteria for a triggered end fitting pretensioner:

- A triggered end fitting pretensioner can be recognised from the wrapped seat belt strap around the shaft.
- Airbag indicator light permanently lit: read out airbag system fault memory.

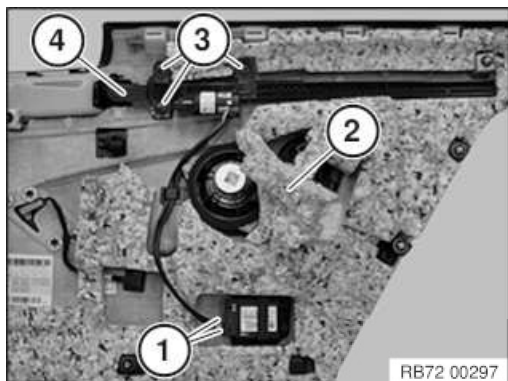
72 11 ... Checklist for front seat

Event		Check	Action
Has at least one belt tensioner and/or one side airbag been activated?	Yes	Check 1 (when installed): Check all seat adjustment options of both front seats. There must be no stiff movement, sticking or other functional problems or noises across the entire adjustment range of all the seat adjustment options. Check head restraints for damage. Check crash-active headrest for activation. Only 2-door model: Check backrest lock. Backrest must unlock and lock easily without any great physical effort.	If components are OK with regard to checks 1 and 2, only replace activated belt tensioner or side airbag. Otherwise, replace faulty parts on the seat/body. Replace belt tensioner, seat belt and, if necessary, side airbag.
		Check 2 (when dismantled): Check for deformation/damage on the following components: 1. All seat cross members on the body 2. Threaded support sleeves in the seat cross members 3. End fittings on the seat mechanism. Check for visible damage or deformation.	
	No	Check all adjustment options of the head restraints. Check crash-active headrest for activation.	Replace faulty parts.
Only seat with integrated seat belt:			
Does the backrest indicator light turn on when the backrest is locked and also when the backrest is shaken?	Yes	Check microswitch of backrest lock and renew if necessary. Check electrical lines and repair if necessary.	If there is still a fault, replace the entire seat
	No	No further action necessary.	



Necessary preliminary tasks:

- Remove [rear side trim panel](#)



Unlock plug connections (1) and disconnect.

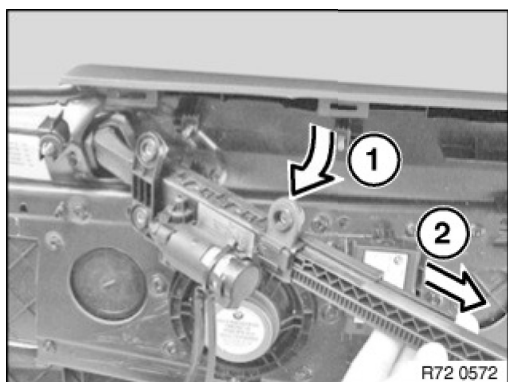
Bend sound insulation (2) to one side.

Unscrew nuts (3).

Release cable from guides and feed out seat-belt extender.

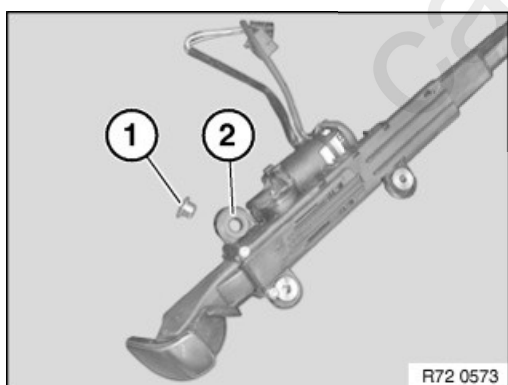
Note:

If screw head turns it has to be held in crosswise position with pliers. Replace nuts after disassembly.



Swivel the seat belt extender outward in the direction indicated by the arrow (1).

Remove the seat belt extender out of the side trim by carefully guiding it in the direction indicated by the arrow (2).

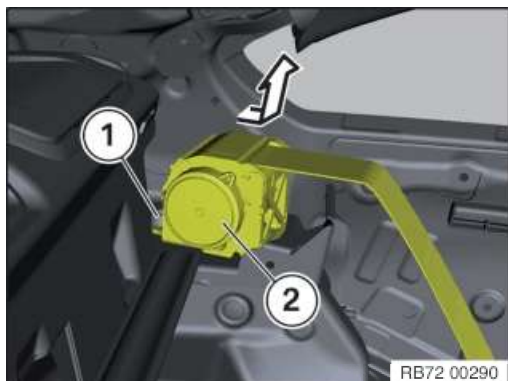


Installation note:

Mount sleeves (1) correctly in rubber mount (2).

**Necessary preliminary tasks:**

- Remove [trim for roof pillar at rear](#)

**Removing left or right automatic reel:**

Undo screw (1) from inertia reel unit (2).

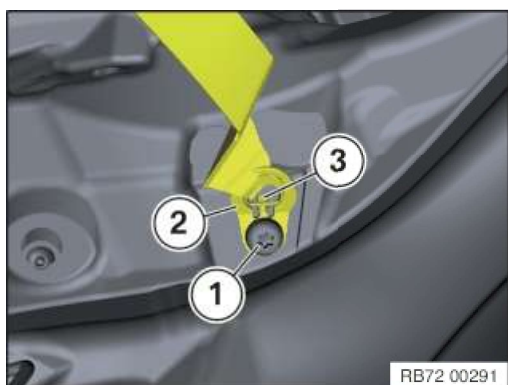
Tightening torque [72 11 20AZ](#).

Remove automatic reel (2) in direction of arrow.

Installation note:

Renew screw (1).

Inertia reel unit (2) is coded against incorrect installation.



Release screw (1).

Tightening torques [72 11 22AZ](#).

Remove seat belt (2).

Installation note:

Renew screw (1).

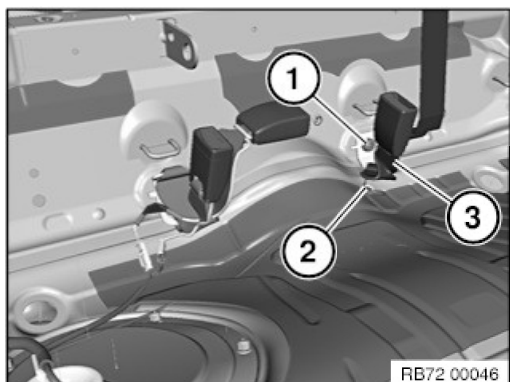
Pin (3) determines the installation position and prevents the end fitting from turning.

**Warning!**

Read and comply with [safety instructions](#) for handling airbag modules and pyrotechnical belt tensioners.

**Necessary preliminary tasks:**

- Remove [rear seat](#)

Removal of left lower strap:

Release screw (1).

Installation note:

Renew screw (1).

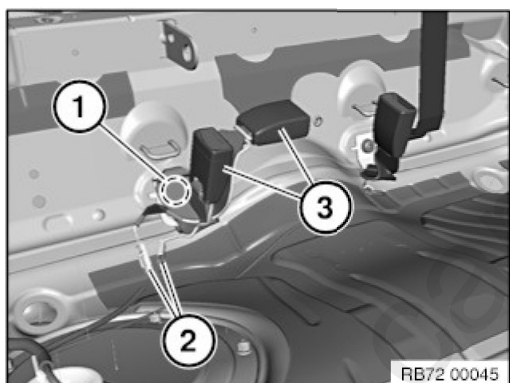
Tightening torque [72 11 23AZ](#).

Unfasten [plug connection](#) (2) and disconnect.

Remove lower strap (3).

Installation note:

Lower strap is coded against incorrect assembly.

Removal of right and middle lower strap:

Note:

Remove the middle lower strap only in combination with the right lower strap.

Release screw (1).

Installation note:

Renew screw (1).

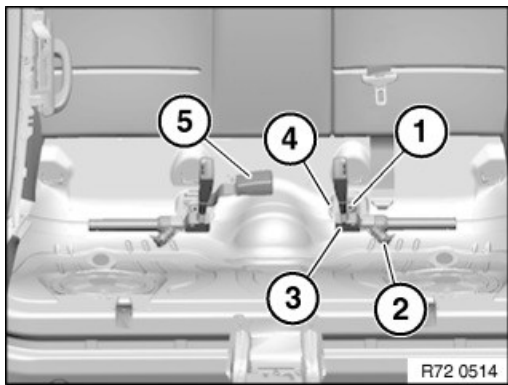
Tightening torque [72 11 23AZ](#).

Unlock [plug connections](#) (2) and disconnect.

Remove lower strap (3).

Installation note:

Lower strap is encoded against incorrect assembly (3).



Lower strap with belt tensioner:

Removal is depicted for the left lower strap; the right strap is removed in the same manner.

Unfasten [plug connection](#) (2) and disconnect.

Release screw (1).

Tightening torque [72 11 23AZ](#).

Remove lower strap (3).

Installation note:

Encoding (4) determines the mounting orientation and prevents the lower strap (3) from twisting.

Note:

Middle lower strap (5) can only be removed in conjunction with right lower strap.

cardiagn.com



Operations are described in:

- Remove [seat belt, rear left and right](#)

Only for 5 seater:

- Remove [rear centre seat belt](#)

cardiagn.com



Operations are described in:

- Remove [lower strap \(belt tensioner\) on driver's seat](#)
- Remove [lower strap \(belt tensioner\) on front passenger seat](#)

cardiagn.com



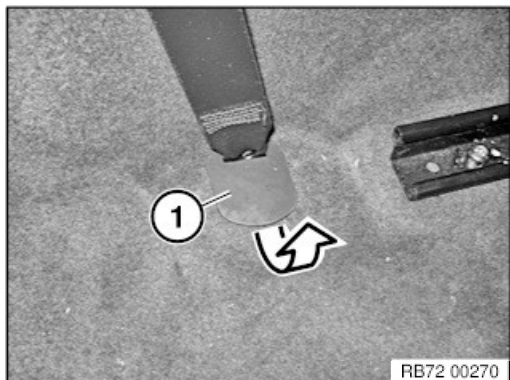
Operations are described in:

- Remove [seat belt, front left and right](#)

cardiagn.com

**Necessary preliminary work:**

- Remove [panel for door post](#)



Unclip cover (1). *Installation note:*
Renew cover (1) after each disassembly.



Release screw (1).

Installation note:
Renew screw (1).

Tightening torque [72 11 2AZ](#).

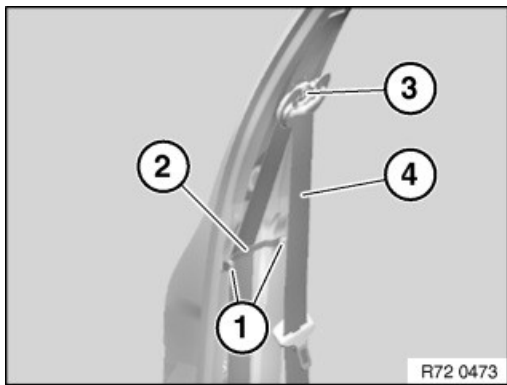
Remove end fitting.

Installation note:
End fitting is coded against incorrect assembly.



Only F82 GTS with CFRP bucket seat: *Installation note:*

Feed seat belt (1) in the marked area as shown through the front seat.



Release screws (1).

Tightening torque [72 11 4AZ](#).

Remove deflector bar (2).

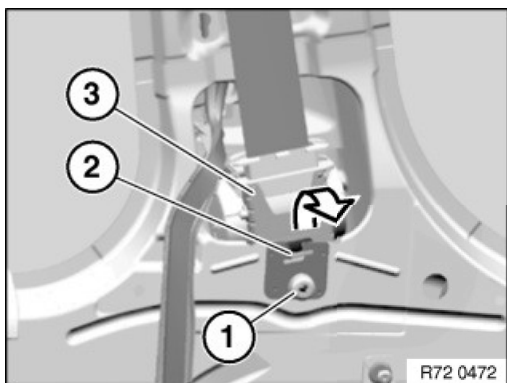
Release screw (3).

Installation note:

Replace screw (3).

Tightening torque [72 11 3AZ](#).

Put seat belt guide loop with seat belt (4) away.



Basic version of seat belt:

Release screw (1).

Installation note:

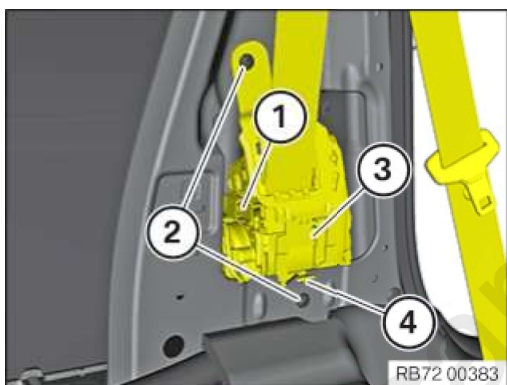
Renew screw (1).

Tightening torque [72 11 1AZ](#).

Remove inertia reel mechanism (3).

Installation note:

The encoding (2) of the automatic reel must be positioned in the body recess.



Version REMA* seat belt / SA5AL Active Protection:

*REMA = reversible electromotive inertia reel

Unfasten plug connection (1) and disconnect.

Unfasten screws (2).

Note:

Replace screws (2).

Tightening torque [72 11 1AZ](#).

Remove automatic reel (3) and detach remaining plug connection.

Installation note:

The encoding (4) of the automatic reel (3) must be positioned in the body recess.



During replacement with version REMA seat belt / SA5AL Active Protection:

Carry out [programming/encoding](#).



Installation note:

Carry out [function check](#).

72 11 070 Removing and installing/replacing front lower strap fitting (belt tensioner), driver's seat



Note:

Only F30 and F35 from Chinese production:

On these vehicles, the following part numbers must be installed when replacing the lower strap:

Production date	Optional equipment SA5AL (Active Protection)	Faulty part		Required new part	
		Part number	Parts	Part number	Parts
until 09/2013	not fitted	7 292 029	Lower strap, left	7 388 505	New part kit with lower strap and seat belt*
until 09/2013	not fitted	7 292 030	Lower strap, right	7 388 506	New part kit with lower strap and seat belt*
until 09/2013	Installed as optional equipment	7 292 029	Lower strap, left	7 259 387	Lower strap, left
until 09/2013	Installed as optional equipment	7 292 030	Lower strap, right	7 259 388	Lower strap, right
from 09/2013	Installed after series production	7 292 029	Lower strap, left	7 259 387	Lower strap, left
from 09/2013	Installed after series production	7 292 030	Lower strap, right	7 259 388	Lower strap, right

***When a new part is installed, the seat belt must also be replaced on vehicles with production date before 09/2013 without optional equipment SA5AL (Active Protection)!**

(Seat belt is included in the new part kit.)



Necessary preliminary work:

- Remove [driver's seat](#).



Warning!

Read and comply with [safety regulations](#) for handling airbag modules and pyrotechnical belt tensioners.

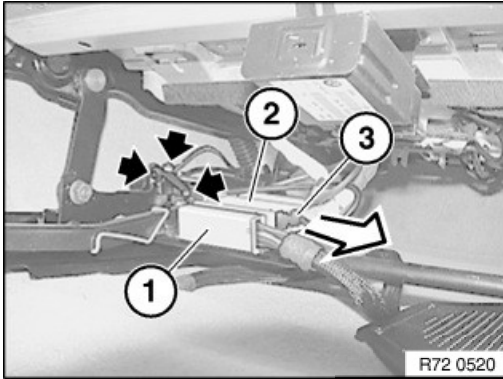
Improper handling can lead to triggering of the pyrotechnical seat belt tensioner or side airbag, resulting in injuries.

Switch off the ignition!



Installation note:

- Microencapsulated screws must be replaced and may not be reused
- Screw connection must be completed within 20 min. (start of hardening)
- Microencapsulated screws must not be retightened
- If the nut is used on more than one occasion, first clean the thread



Unfasten plug connection (1) and disconnect.

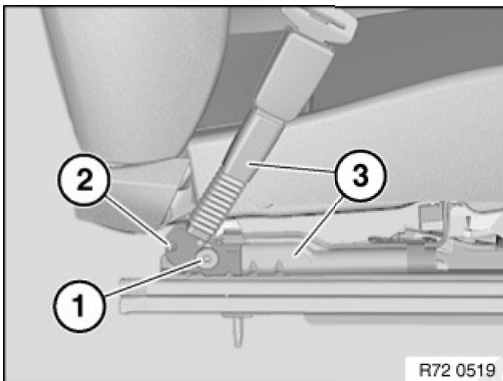
Unlock plug connection (3) and pull all connectors out of connector housing (2).

Disconnect all cable straps.

Removing wiring harness.

Installation note:

- Replace cable strap.
- Cables must not be under tension
- Plugs are coded and must be reinstalled in the correct sequence in the connector housing



Release screw (1).

Tightening torque [72 11 05AZ](#).

Remove belt pretensioner (3).

Installation note:

Replace screw (1).

Belt tensioner (3) is secured through recess (2) on retaining bracket.

72 11 071 Removing and installing/replacing front lower strap fitting (belt tensioner), front passenger seat



Note:

Only F30 and F35 from Chinese production:

On these vehicles, the following part numbers must be installed when replacing the lower strap:

Production date	Optional equipment SA5AL (Active Protection)	Faulty part		Required new part	
		Part number	Parts	Part number	Parts
until 09/2013	not fitted	7 292 029	Lower strap, left	7 388 505	New part kit with lower strap and seat belt*
until 09/2013	not fitted	7 292 030	Lower strap, right	7 388 506	New part kit with lower strap and seat belt*
until 09/2013	Installed as optional equipment	7 292 029	Lower strap, left	7 259 387	Lower strap, left
until 09/2013	Installed as optional equipment	7 292 030	Lower strap, right	7 259 388	Lower strap, right
from 09/2013	Installed after series production	7 292 029	Lower strap, left	7 259 387	Lower strap, left
from 09/2013	Installed after series production	7 292 030	Lower strap, right	7 259 388	Lower strap, right

***When a new part is installed, the seat belt must also be replaced on vehicles with production date before 09/2013 without optional equipment SA5AL (Active Protection)!**

(Seat belt is included in the new part kit.)



Necessary preliminary work:

- Remove [front passenger seat](#)



Warning!

Read and comply with [safety regulations](#) for handling airbag modules and pyrotechnical belt tensioners.

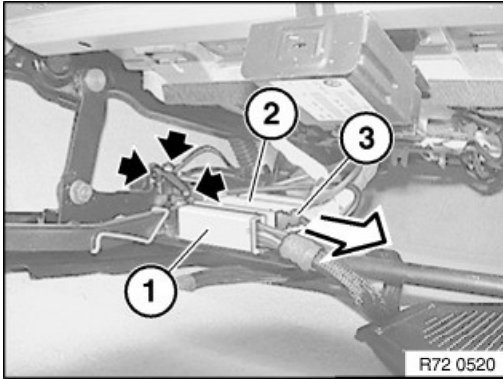
Improper handling can lead to triggering of the pyrotechnical seat belt tensioner or side airbag, resulting in injuries.

Switch off the ignition!



Installation note:

- Microencapsulated screws must be replaced and may not be reused
- Screw connection must be completed within 20 min. (start of hardening)
- Microencapsulated screws must not be retightened
- If the nut is used on more than one occasion, first clean the thread



Unfasten plug connection (1) and disconnect.

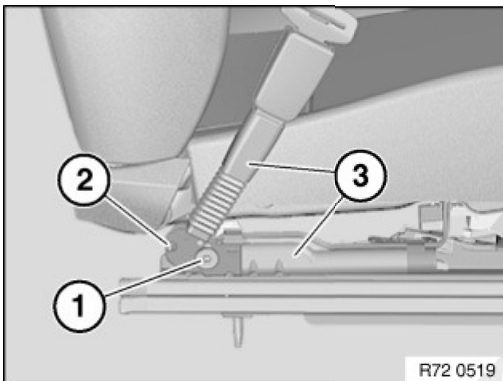
Unlock plug connection (3) and pull all connectors out of connector housing (2).

Disconnect all cable straps.

Removing wiring harness.

Installation note:

- Replace cable strap.
- Cables must not be under tension
- Plugs are coded and must be reinstalled in the correct sequence in the connector housing



Release screw (1).

Tightening torque [72 11 05AZ](#).

Remove belt pretensioner (3).

Installation note:

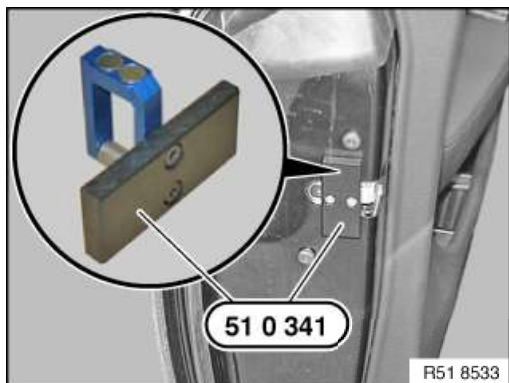
Replace screw (1).

Belt tensioner (3) is secured through recess (2) on retaining bracket.



Special tools required:

- [51 0 341](#)



Open door.

Insert special tool [51 0 341](#) in rotary striker of door lock and close rotary striker manually.



Operate ignition (Terminal 15) to extend the seat belt extender.

For working area, see marked area.

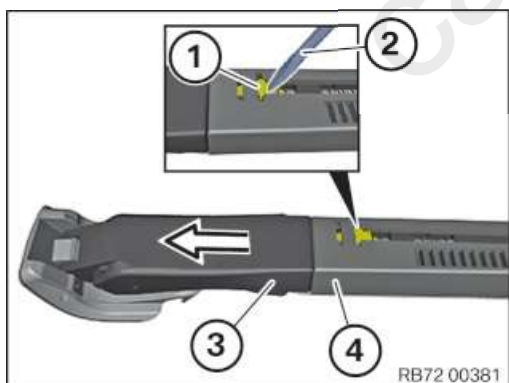
Note:

Driver's side:

Seat belt extender remains in the extended condition for about 2 minutes (repeat process as needed. Do not hold down seat-belt extender against resistance).

Front passenger:

Subject front passenger seat to load suitably, so as to maintain the seat-belt extender in extended status (if necessary, repeat process. Do not hold down seat-belt extender against resistance).



Slide latch mechanism (1) with screwdriver (2) slightly backwards.

Pull out hand seat-belt extender (3) from seat-belt extender (4).



Installation note:

Hold down the rack while installing the seat-belt extender hand to prevent damage to the rack and to avoid transmission.

Slide seat-belt extender hand into seat-belt extender until it is completely locked.

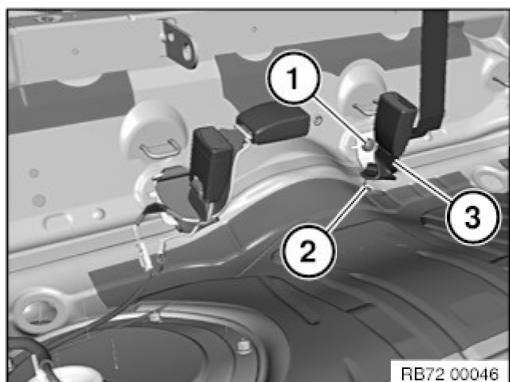
cardiagn.com

**Warning!**

Read and comply with [safety instructions](#) for handling airbag modules and pyrotechnical belt tensioners.

**Necessary preliminary tasks:**

- Remove [rear seat](#)

Removal of left lower strap:

Release screw (1).

Installation note:

Renew screw (1).

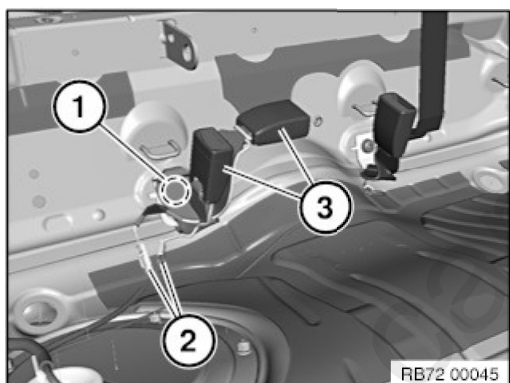
Tightening torque [72 11 23AZ](#).

Unfasten [plug connection](#) (2) and disconnect.

Remove lower strap (3).

Installation note:

Lower strap is coded against incorrect assembly.

Removal of right lower strap:

Note:

Remove the middle lower strap only in combination with the right lower strap.

Release screw (1).

Installation note:

Renew screw (1).

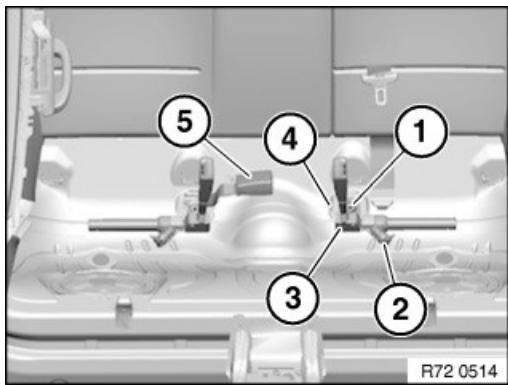
Tightening torque [72 11 23AZ](#).

Unlock [plug connections](#) (2) and disconnect.

Remove lower strap (3).

Installation note:

Lower strap is encoded against incorrect assembly (3).



Lower strap with belt tensioner:

Removal is depicted for the left lower strap; the right strap is removed in the same manner.

Unfasten [plug connection](#) (2) and disconnect.

Release screw (1).

Installation note:

Renew screw (1).

Tightening torque [72 11 23AZ](#).

Remove lower strap (3).

Installation note:

Encoding (4) determines the mounting orientation and prevents the lower strap (3) from twisting.

Note:

Only remove the right lower strap (5) in combination with the middle lower strap.

cardiagn.com

72 Safety information and general information

Notes on safety

- > [Safety regulations](#) for handling airbag modules and pyrotechnic belt tensioners
- > [Notes on scrapping](#) vehicles with gas generators

Handling electrical system and electronics

- > [Unlocking/locking airbag plug connections](#)
- > [Repairing airbag lines](#)
- > [Handling optical fibres](#)

Check

- > [Check seat belt](#)
- > [Checklist for seat belt](#)

Airbag system

- > See diagnosis system for FUB and check
- > [Deactivating airbags](#)
- > [Procedure after airbag deployment](#) .

Active pedestrian protection

- > [Procedure after actuator triggering](#)

**Warning!**

The responsibility for deactivation/activation rests with the customer.

When a child restraint system is used on the front passenger seat, the front passenger airbags must be deactivated, otherwise there is an increased risk of injury for the child in the event of airbag deployment even with a child restraint system.



The front passenger airbag can only be deactivated in accordance with the following instructions if the vehicle is equipped with a suitable key switch!



The following airbags are deactivated simultaneously with the key switch (1):

- Front passenger airbag
- Side airbag (passenger's side)
- If necessary, knee airbag in US version (passenger's side)

The airbags can only be deactivated/reactivated while the vehicle is stationary and with the door open.

Attention!

The head airbag remains active.

**Deactivation**

- A Turn key switch with integrated key (1) from the remote key to the "OFF" position.

Deactivatable airbags on passenger's side out of operation.

Head airbag on passenger's side remains active.

All airbags on driver's side remain active.

Activate

- B Turn key switch with integrated key (1) from the remote key to the "ON" position.

All the airbags in the vehicle are activated and are triggered in appropriate situations.

**Indicator light**

When the ignition key is turned in the ignition lock, the function of the airbag system is checked and the indicator light lights up for several seconds.

- A The indicator light is continuously ON when the front passenger airbags are deactivated
- B The indicator light goes out after a few seconds when the front passenger airbags are activated

72 12 ... Notes on scrapping vehicles with gas generators (airbag system)

The gas generator is a pyrotechnic component and is for the most part permanently mounted on the following components:

- Airbag module
 - Driver's/ front passenger airbag
 - Side airbag
 - Head airbag
 - Knee airbag
- Electromotive automatic reel
- Belt end fitting tensioner
- Seat belt tensioner
- Safety battery terminal
- Active head restraint

In accordance with accident prevention regulations and specific national regulations, gas generators must be rendered unusable before they are scrapped. This is necessary because pyrotechnical objects can cause injury if improperly activated (e.g. scrapping with flame cutters).

In vehicles intended for scrapping it is paramount prior to draining and further stripping work to ensure that all gas generators **in the vehicle** have been activated. The fired gas generators can then be scrapped together with the vehicle.

Gas generators that have not fired constitute a hazard (also to the environment)!

Ignition failure:

If correct ignition is not possible, the relevant components must be removed and disposed of by special waste disposal companies!

Comply with [safety regulations](#) for handling airbag system components.

If an ignition has failed:

- Disconnect the igniter from the vehicle battery and
- Wait a few minutes before approaching the vehicle

The components of an airbag system must always be disposed of. Such components must not be sold on as used parts.

ignition:

Ignition of the gas generators may only be carried out by expert personnel and under the supervision of a responsible person. Other standard accident prevention regulations (safety goggles, ear defenders etc.) must also be observed.

The gas generators must be fired from the outside in this vehicle which has been earmarked for scrapping. In this process

- the doors must be closed
- the tailgate must be open
- the side windows must be open and
- Slide/tilt sunroof open

Use igniters with the appropriate cables to activate the gas generators.

Warning!

Once gas generators have been fired, observe a ventilation period of 10 minutes with the doors opened. Only then is it permitted to continue work inside the vehicle.

Wear protective goggles and protective gloves when handling a fired gas generator!

The burning of solid propellant will heat up the airbag unit - danger of burns!

Wash skin with water after contact with fired gas generators!

cardiagn.com

72 12 ... Procedure after airbag deployment as result of an accident

Replace all components that were affected by the accident and check all others!

Check and/or replace following components after airbag deployment:

- Components
 - Safety battery terminal
 - Sensor B-pillar (left/right)
 - Sensor front door (left/right)
 - Sensor seat, Driver-/passenger's side
 - Airbag control unit, vehicle interior
 - Pedestrian protection sensor
 - Front sensor (engine compartment)
- Procedure
 - Inspect visually for mechanical damage (housing, plug connections). Replace damaged components
 - Connect diagnosis system
 - Read fault memory
 - Disconnect the vehicle battery and adhere to the waiting period (at least 30 seconds)
 - Inspect visually for mechanical damage
 - Rectify faults
 - Reconnect the vehicle battery and adhere to the waiting period (at least 10 seconds)
 - Delete fault memory
 - Switch off ignition and wait at least 2 minutes (no consumers may be switched on during this period such as interior light, radio, etc.)
 - Switch the ignition on (wait for at least 10 seconds)
 - Delete fault memory
 - If you cannot delete the fault memory: Replace the component that is causing the fault

Replace the airbag control unit in the following cases only:

- In the case of visible external damage
- In the case of a corresponding fault memory entry (airbag indicator light is illuminated)

Cables and connectors

- Components and procedure
 - Check cables and connectors for damage, replace if necessary.
(e. g. corrosion, correct engagement, bent pin)

Seat belt system

- Components
 - Automatic reel
 - Seat belt tensioner
 - Seat belt height adjustment
 - End fitting pretensioner
 - Seat belt buckle
- Procedure
 - Check components, replace if necessary
 - Additional door lock: Check for foreign body, remove it if necessary

Seats

- Components
 - Seat
 - Airbag module
 - Active head restraint
- Procedure
 - Check seats (functional check of seat mechanism), replace if necessary

- Check seat connection
- Replace gas generator of active head restraint

If the severity of the crash has not caused any other damage to the seat, only the triggered gas generator needs to be replaced

External feature: The triggered head restraint is folded forwards and engaged

The repair work can be carried out in the vehicle with the rear panel removed. The entire system can be pushed back into its original position and the new gas generator installed

The gas generator can be replaced up to 5 times

- Replace airbag module and seat cover with upholstery
- **I01 only:** If one of the following criteria is met, the backrest frame must be replaced
(Part number of backrest frame: 52 10 7 388 646)
 - Activated belt tensioner
 - Activated end fitting pretensioner
 - Outer cover unclipped by a side collision
 - Outer cover ripped off by a side collision
 - Faulty clip connection on outer cover caused by a side collision

Driver's airbag

- Components
 - Airbag module
 - Steering wheel
 - Steering column (if damaged)
- Procedure
 - Check components, replace if necessary
 - Replace steering wheel

Front passenger airbag

- Components
 - Airbag module
 - Dashboard trim panel (must be replaced!)
 - Supporting tube (if damaged)
- Procedure
 - Check components, replace if necessary

Side airbag, front/rear

- Components
 - Airbag module
 - Door trim panel
 - Door in white
 - Seat
- Procedure
 - Check components; replace if necessary

Head airbag

- Components
 - Airbag module
 - A-pillar trim panel
 - Roofliner
 - B-pillar trim panel (if damaged)
 - C-pillar trim panel (if damaged)
 - Connection/mount (on side frame)
- Procedure
 - Check components, replace if necessary

Knee airbag

- Components
 - Trim panel (driver's side)
 - Lower section of glove box
 - Knee protection(Driver- and passenger's side)
- Procedure
 - Check components, replace if necessary

Knee protection

- Components
 - Trim panel (driver's side)
 - Glove box incl. knee protection (passenger's side)
- Procedure
 - Check components for damage, replace if necessary
 - Check retaining elements

cardiagn.com

41 00 ... Procedure for vehicles with active pedestrian protection after an accident

The active pedestrian protection system consists of the following components:

- *Satellites (control unit + sensor)*
 - Sensors, inside, bumper panel, left/centre/right
 - ACSM control unit (Crash Safety Module)
- *Cables and connectors*
- *Engine compartment lid hinges*
 - Actuator
 - Engine compartment lid hinge

In case of a frontal crash or side collision in the area of the bonnet and/or the A-pillars, check the following components:

Satellites (control unit + sensor)

- Procedure
 - Read fault memory.
 - Disconnect the vehicle battery and observe the waiting period.
 - Rectify fault.
 - Reconnect the vehicle battery and observe the waiting period.
 - Delete the fault memory.
 - Switch off ignition and wait at least 2 minutes (no consumers, such as e.g. interior light, radio, etc., may be switched on during this period).
 - Switch the ignition on.
 - Read fault memory and rectify faults if necessary.

Cables and connectors

- Procedure
 - Check cables and connectors for damage, replace if necessary.

Procedure with activation of active pedestrian protection:

Engine compartment lid hinges

- Replace [actuators](#).
- [Check both bonnet hinges](#). Replace damaged hinges.
If necessary, repair hinges with [repair kit](#).
If no repair kit is available, the hinge must be replaced.

Model	Repair kit available
F15, F16	No
F20, F21, F22, F23, F32, F33, F34, F36, F80, F82, F83, F87	Yes
F55, F56, F57, F60	No
F45, F46, F48, F49, F39	No

Procedure without activation of active pedestrian protection:

Engine compartment lid hinges

- Check [both bonnet hinges](#) and replace if necessary.
- If the hinge is damaged, the [actuator](#) must also be replaced.

cardiagn.com

72 12 000 Removing and installing or replacing airbag module on passenger's side



Important!

Operations on pyrotechnical devices may only be carried out by authorised experts.

Improper, unauthorised operations may result in serious dangers.

Unauthorized persons are strictly prohibited from performing any operations on this system.



Warning!

Read and comply with [safety instructions](#) for handling airbag modules and pyrotechnical belt tensioners.

Incorrect handling can activate airbag and cause injury.

A damaged airbag must be replaced because its protective function is compromised or, in an extreme situation, it can no longer execute its protective function.



Necessary preliminary tasks:

- Remove [dashboard](#)



Release all screws on airbag module.

Tightening torque [72 12 01AZ](#).

Remove airbag module from dashboard.

**Special tools required:**

- [2 230 142](#)

**Important!**

Operations on pyrotechnical devices may only be carried out by authorised experts.

Improper, unauthorised operations may result in serious dangers.

Unauthorized persons are strictly prohibited from performing any operations on this system.

**Warning!**

Read and comply with [safety instructions](#) for handling airbag modules and pyrotechnical belt tensioners.

Incorrect handling can activate airbag and cause injury.

A damaged head airbag must be replaced.

A damaged head airbag exhibits an impaired protective function and in extreme cases loses its protective function altogether.

*Necessary preliminary tasks:*

- Disconnect [battery negative cable](#)
- Remove [headlining](#)
- Follow [notes](#) for unlocking and locking airbag connector connection
- Remove [rear seat belt cover](#)

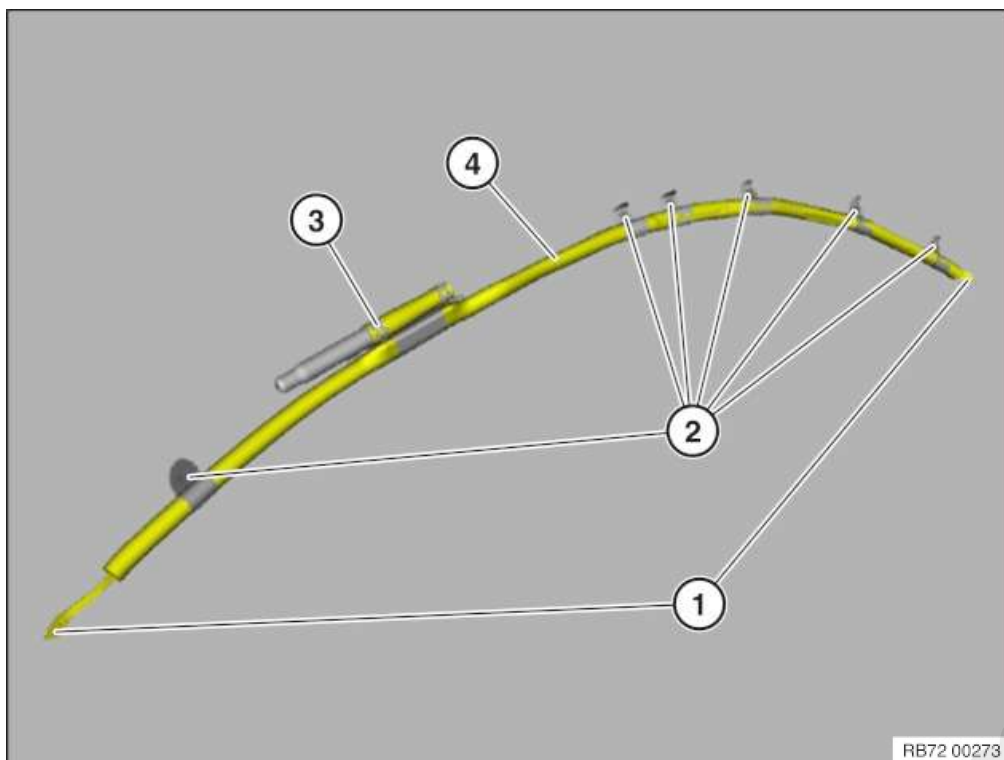
**Important!**

Lay out protective mats to protect the interior equipment against swarf from the drilled-out rivets and damage.

Lay out protective mats in the relevant working area:

- Instrument panel
- Entrance area
- Passenger compartment

Installation overview, retaining elements, head airbag:



- | | |
|--|-----------------------------|
| 1 Rivets for retaining strap (US version only) | 3 Gas generator |
| 2 Retaining clips for folding pack | 4 Folding pack, head airbag |



Important!

When removing head airbag, do not damage

- Head airbag
- Retaining clips
- Trim panels

Do not damage!



To unlock the retaining clips, use special tool [2 230 142](#) .

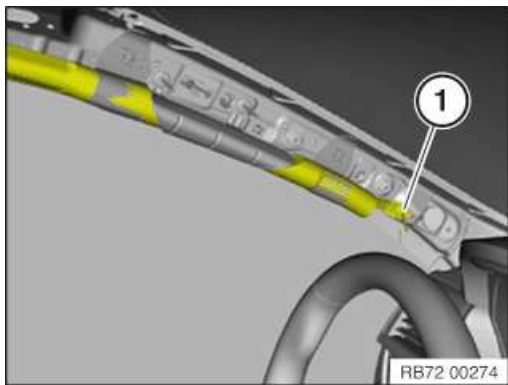
Unlock and remove all retaining clips.

Installation note:

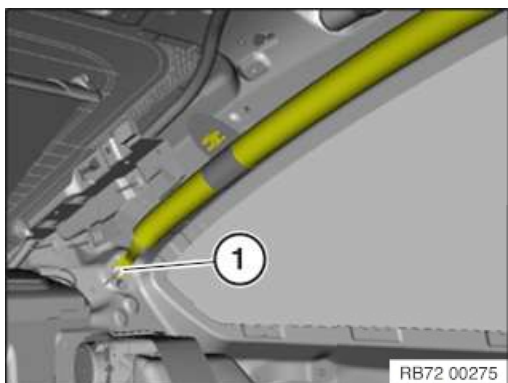
Mounting clips of folding pack must not be damaged.

Replace faulty retaining clips.

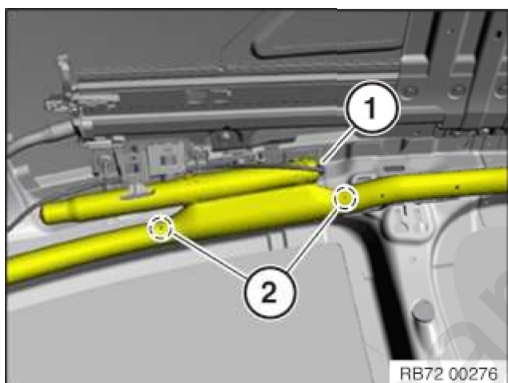
Replace retaining clips after airbag deployment.



For US version:
Drill out rivet head (1).



For US version:
Drill out rivet head (1).



Unlock plug connection(1) [for gas generator](#) and disconnect.
Drill out rivet heads in marked area (2).
Remove the gas generator with the folding pack.



Note:
Note [instructions](#) for the removal of rivets.
Installation note:
Gas generator is coded against incorrect assembly.



Warning!

Observe [safety regulations](#) for handling airbag modules and pyrotechnical seat belt tensioners.

Incorrect handling can cause airbags to trigger, resulting in serious injuries.



Attention!

Operations on pyrotechnical devices may only be carried out by authorised experts.

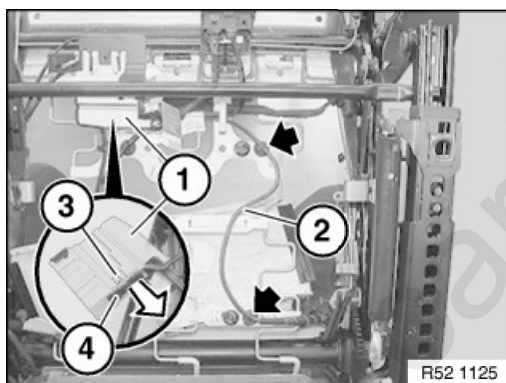
Improper, unauthorised operations may result in serious dangers.

Unauthorized persons are strictly prohibited from performing any operations on this system.



Necessary preliminary work:

- Disconnect [negative battery cable](#)
- Remove [front seat](#)
- Partially detach [backrest cover](#)



Attention!

Make sure airbag wiring harness is exactly routed when installed.

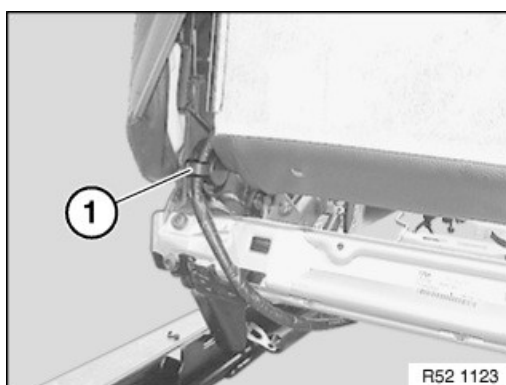
Detach cable strap.

Release airbag wiring harness (2) from cable clips on seat mechanism.

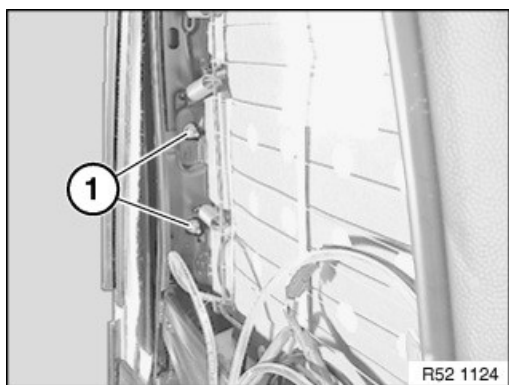
Raise release clip (3) and pull connector (4) out of connector housing (1).

Note:

If necessary, release yellow connector housing (1) from holder on seat mechanism.



Unclip the omega cable clip (1) from the seat mechanism.



Unscrew nuts (1). *Installation note:*

Replace nuts (1).

Tightening torques [72 12 03AZ](#).



Attention!

Feed the wiring harness carefully through the seat and backrest mechanism as the edges of the frame can be sharp.

cardiagn.com

72 12 061 Removing and installing/replacing left or right head airbag (version with slide/tilt sunroof)



Important!

Operations on pyrotechnical devices may only be carried out by authorised experts.

Improper, unauthorised operations may result in serious dangers.

Unauthorized persons are strictly prohibited from performing any operations on this system.



Warning!

Read and comply with [safety instructions](#) for handling airbag modules and pyrotechnical belt tensioners.

Incorrect handling can activate airbag and cause injury.

A damaged head airbag must be replaced.

A damaged head airbag exhibits an impaired protective function and in extreme cases loses its protective function altogether.



Note:

Except for the operations for [Removing headlining](#), this task is identical to:

- Removing and installing/replacing left or right [head airbag](#) (version without slide/tilt sunroof)

61 00 ... Repairing airbag cables

Important!

Only repair those cables which show visible signs of damage. In the event of visible damage, make sure there is only one cable repair in effect after the repair work. If no visible damage can be identified, the entire cable must be replaced. When carrying out repairs to the airbag wiring harness, you must use the spare parts offered in the Electronic Parts Catalogue (EPC).

Safety regulations for [handling components of airbag system](#).

[Instructions for disconnecting and connecting battery](#).

In event of non-visible damage to wiring harness:

Disconnect plug connection on airbag module or on adapter plug. It is absolutely vital to disconnect the contacts in succession as there is a risk of mixing up (similar parts)! Cut through one cable after the other at an appropriate position, do not under any circumstances cut through both cables at the same time. Insulate cables remaining in wiring harness with insulating tape. Now disconnect plug connection on airbag control unit. Unpin contacts. Cut through one cable after the other at an appropriate position and insulate with insulating tape, do not under any circumstances cut through both cables at the same time. Pin contacts of repair cable for airbag control unit in control unit plug, assignment of repair cables is relevant. Lay repair cable in vehicle parallel to existing airbag lead. Now pin in contacts for airbag control unit or contacts of adapter plug, assignment of repair cables is relevant. Cut off excess length of repair cable in proximity (visible area) of airbag module or of adapter plug. Twist open cables. With the butt connectors and heat-shrink tubings in the Electronic Parts Catalogue (EPC), reconnect the cables with the same cable colours. Twist cables again, open length (twist) must not exceed 40 mm. Secure interface (heat-shrink tubing) with insulating tape to prevent cables from twisting open.

Instructions for cutting off, insulating, crimping cables, installing and removing contacts:

[Cutting off and insulating cables](#).

[Repairing a plug connection using butt connectors](#).

[Installing and removing contacts](#).

In event of visible damage:

Expose cable at damaged areas. Cut through one cable after the other at an appropriate position and insulate cables no longer required in wiring harness with insulating tape, do not under any circumstances cut through both cables at the same time. Now, depending on the scope of work, unpin contacts either on airbag control unit/airbag module or on adapter plug. Cut off unpinned cables. Insulate cables remaining in wiring harness with insulating tape. Now pin in contacts of repair cable, assignment of repair cables is relevant. Lay repair cable in vehicle parallel to existing airbag lead up to separation point. Cut off excess length of repair cable. Twist open cables. Connect cables with butt connectors and heat-shrink tubings in Electronic Parts Catalogue (EPC), assignment of repair cables is relevant. Twist cables again, open length (twist) must not exceed 40 mm. Secure interface (heat-shrink tubing) with insulating tape to prevent cables from twisting open.

Instructions for cutting off, insulating, crimping cables, installing and removing contacts:

[Cutting off and insulating cables](#).

[Repairing a plug connection using connectors](#).

[Installing and removing contacts](#).

72 Safety information and general information

Notes on safety

- > [Safety regulations](#) for handling airbag modules and pyrotechnic belt tensioners
- > [Notes on scrapping](#) vehicles with gas generators

Handling electrical system and electronics

- > [Unlocking/locking airbag plug connections](#)
- > [Repairing airbag lines](#)
- > [Handling optical fibres](#)

Check

- > [Check seat belt](#)
- > [Checklist for seat belt](#)

Airbag system

- > See diagnosis system for FUB and check
- > [Deactivating airbags](#)
- > [Procedure after airbag deployment](#) .

Active pedestrian protection

- > [Procedure after actuator triggering](#)

72 00 ... Safety regulations for handling components with gas generators

It is essential to comply with the regulations as specified in the law relating to the use of explosives when working on airbag units and seat belt tensioners.

Airbags, seat belt tensioners etc. are pyrotechnical objects. Pyrotechnical objects are assigned to different danger classes on the basis of the quantity of propellant that they contain. The assignment can be ascertained from the identification marking on the product:

Attention!

Failure to comply with the warning notices and repair instructions for gas generator components can cause accidental deployment and result in injury and vehicle damage!

This applies in particular to the following components:

- Airbag modules (driver's/front passenger airbags, side airbags)
- Seat belt tensioner
- Head airbag
- Active knee protection
- Active head restraint
- Safety battery terminal

1. Regulations

The regulations quoted in the following refer to the Federal Republic of Germany.

In all other countries, the relevant legislation and regulations must be observed in each case. Country-specific legal regulations that go beyond this information or court decisions based thereon must be followed in each case or given precedence over these regulations.

- Pyrotechnical restraint systems are subject to danger class PT1
- Gas generators are pyrotechnical objects belonging to danger class T1

Handling, transporting and storing non-fired gas generators are subject to the "Explosive Materials Act" (law relating to the use of explosives dated 13/09/1976).

The relevant trade supervisory authority must be notified at least 2 weeks before pyrotechnical objects are handled for the first time. In this process, notify the person responsible at the relevant authority (e.g. dealership owner, holder of general power of attorney, technical supervisor) in writing. A certificate of qualification, i.e. specific training, is not required for the person responsible.

2. Dismantling and installation

- Checking and installation work must be carried out by professionally trained personnel only.
- Work on airbag system components must only ever be carried out with a disconnected vehicle battery, covered negative terminal and disconnected plug connection of the cable leading to the gas generator. Observe the specified waiting period if merely the vehicle battery is disconnected:
 - 30 min. for vehicles up to 9/93
 - 1 min. for vehicles from 9/93 onward
- In the event of breaks in work, a component with a gas generator that has been removed must be secured against access by other persons.
- Individual components must never be repaired. Instead, always replace them.
- Do not treat airbag system components with cleaning agents or grease.
- Components of the airbag system must not be exposed to temperatures in excess of 75 °C.
- Airbag system components, including electronic diagnostic components, which have been dropped from heights in excess of 0.5 m must not be reinstalled in the vehicles.
- Do not remove components of the airbag system from the original packaging until immediately before they are to be installed in the vehicle.

- Before installing, subject components such as housing, connector pins ,etc. of the airbag system (including diagnosis electronics) to a visual inspection for damage and replace if necessary.
- Airbag system components may only be electrically tested while they are installed and only with the diagnosis system.
- **Danger of injury:** The airbag module may only be set down with the airbag itself facing *upwards*. Otherwise the gas generator may be propelled upwards upon potential ignition of the gas generator.
- Do not point the ignition squib of a gas generator at other persons.
- Components with gas generators must not be fired while they are removed. They must be disposed of by special disposal companies or returned in the packaging of the new parts.
- When carrying out straightening and welding work with an electric welder:
 - Disconnect the vehicle battery
 - Cover negative terminal (post)
- Avoid all contact with the skin when removing a fired airbag module - wear gloves. Wash with water after contact with the skin.

3. Transport

- Components with gas generators must be sent off in the packaging of the new components.

4. Storage

- Observe the regulations of the relevant trade supervisory authority and the applicable national regulations.

**Warning!**

[Read and comply with](#) safety regulations for handling airbag modules and pyrotechnical belt tensioners.

**Attention!**

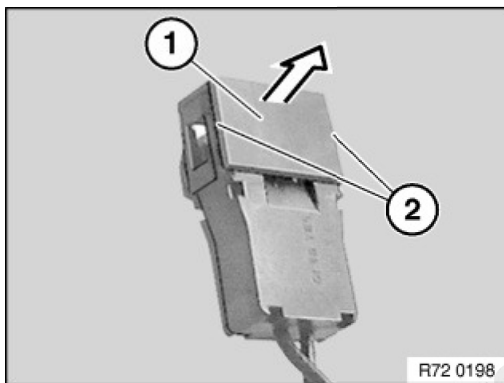
An airbag plug connection must be replaced if it is damaged.

Sourcing reference for airbag repair instructions (with plug connection), see Electronic Parts Catalogue.



Following versions of plug connections on airbag module/gas generator are possible:

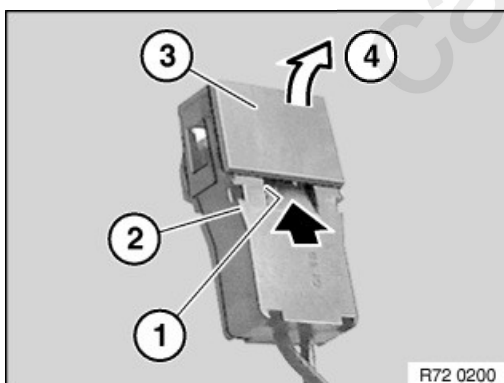
- Airbag plug connection on gas generator/airbag module is offset by 90°
- Airbag plug connection on gas generator/airbag module is straight (3 versions)

**Airbag plug connection on gas generator/airbag module offset by 90°:**

There are two ways of unlocking this airbag plug connection on the gas generator/airbag module:

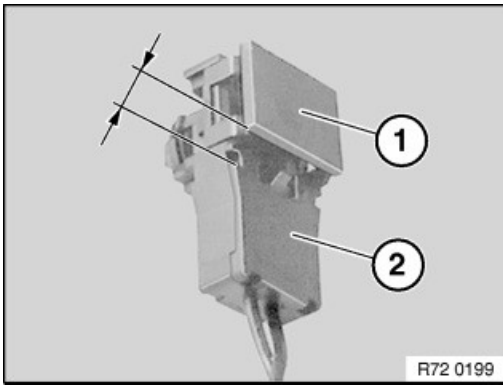
Method 1:

Simultaneously pull cover (1) upwards at lugs on left and right (2).

Method 2:

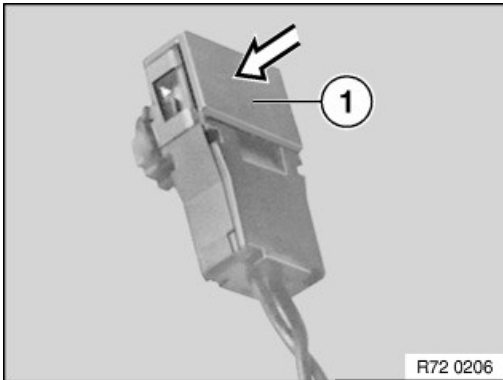
Insert a narrow screwdriver into recess (1) in housing (2).

Carefully prise cover (3) off (4).



Cover (1) is not positioned higher than housing (2).

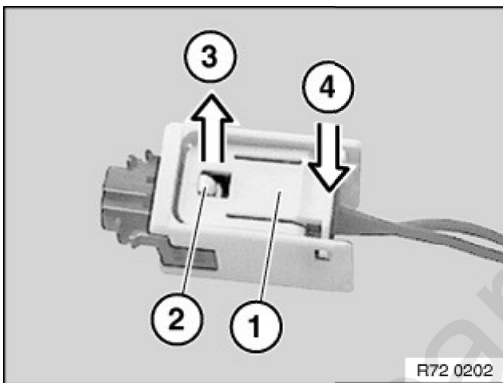
The airbag plug connection is unlocked and can now be detached from the gas generator/airbag module.



Installation note:

After attaching airbag plug connection to gas generator/airbag module, press cover (1) downwards until it rests flat on housing.

Check that it catches properly.



Airbag plug connection on gas generator/airbag module is straight (2 versions)

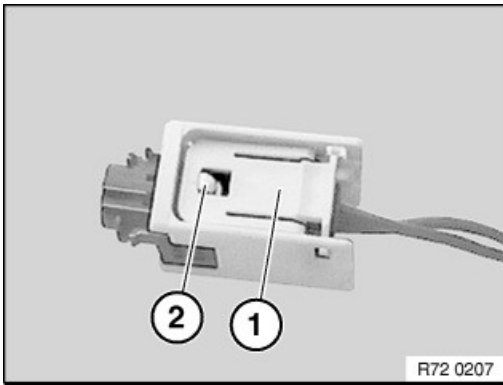
Version 1:

Press locking/unlocking plate (1) at edge (4).

Locking/unlocking plate (1) snaps upwards at opposite edge (3) and releases detent lug (2).



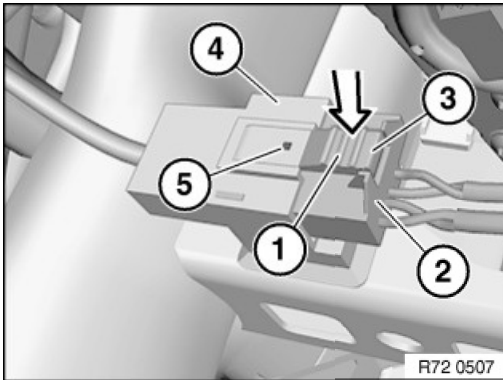
The airbag plug connection is unlocked and can now be detached from the gas generator/airbag module.



Installation note:

After attaching airbag plug connection to gas generator/airbag module, check whether detent lug (2) is visible in opening of locking/unlocking plate (1).

Only if the detent lug (2) is visible will the airbag plug connection gas generator/airbag module be correctly engaged.

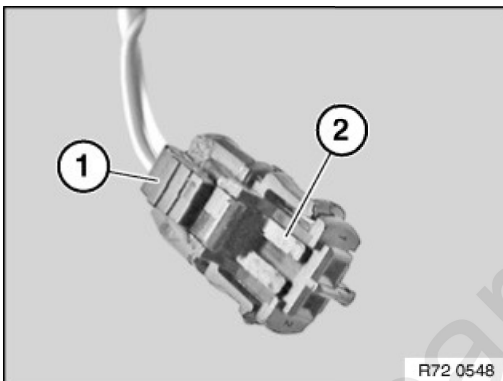


Version 2:

Press locking/unlocking plate (1) on edge (3) and pull plug (2) out of plug housing (4).

Installation note:

Only if the detent lug is visible in opening (5) will the gas generator/airbag module plug connection be correctly engaged.



Version 3:

Press the lock (1) and pull out the connector (2) up to initial engagement position.

Detach connector (2) from firing pellet.

Installation note:

Insert plug connection in initial engagement position in gas generator/airbag module and engage in final engagement position.

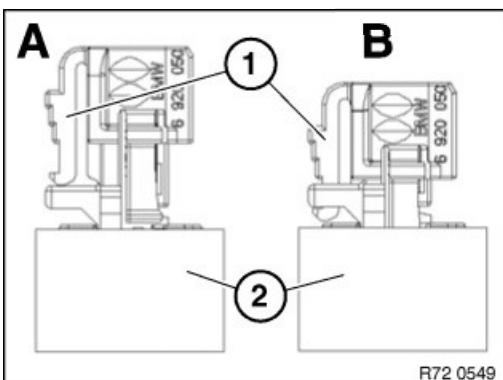
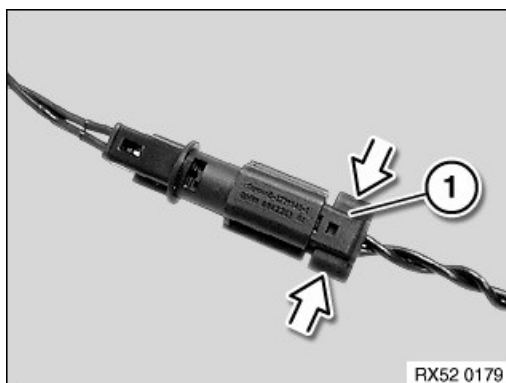


Illustration of version 3 with gas generator:

- A. Initial engagement position
- B. Final engagement position
- 1. Lock
- 2. Gas generator



Version 4 - crash-active headrest:

Press locking clip at edge and disconnect plug (1).

Installation note:

Check for correct engagement.

cardiagn.com



Screw securing adhesive is a means of preventing a screwed connection from being loosened by external influences.

Once the screw has been coated with adhesive, the adhesive remains inactive until such time that it is activated by the encapsulation breaking when the screw is inserted and then cures (hardens) at room temperature.



Installation note:

- Screw connection must be completed within 20 mins. (start of curing)
- Microencapsulated screws must not be retightened
- Thread of nut must be cleaned beforehand in event of repeated use

cardiagn.com

72 Safety information and general information

Notes on safety

- > [Safety regulations](#) for handling airbag modules and pyrotechnic belt tensioners
- > [Notes on scrapping](#) vehicles with gas generators

Handling electrical system and electronics

- > [Unlocking/locking airbag plug connections](#)
- > [Repairing airbag lines](#)
- > [Handling optical fibres](#)

Check

- > [Check seat belt](#)
- > [Checklist for seat belt](#)

Airbag system

- > See diagnosis system for FUB and check
- > [Deactivating airbags](#)
- > [Procedure after airbag deployment](#) .

Active pedestrian protection

- > [Procedure after actuator triggering](#)